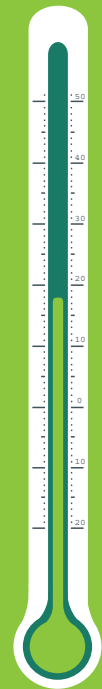


future green

Carbon finance and the future



MAKE THINGS HAPPEN



NEDBANK | CAPITAL

A Member of the  OLD MUTUAL Group



CO₂

THE DEBATE ON CLIMATE CHANGE, WHAT IT IS OR WHY IT'S HAPPENING, IS OVER. THE QUESTION NOW IS HOW BUSINESS SHOULD OPERATE IN A CARBON-CONSTRAINED FUTURE.

Towards a greener future

It is widely accepted that, unabated, climate change will result in increased damage to infrastructure and physical assets, disruption to business operations and agricultural output, and ultimately lead to loss of life. The Stern Review on the Economics of Climate Change supports this view and estimates that without direct intervention the annual cost will be at least 5%, and may be more than 20% of world GDP each year.

Consequently, world society faces considerable challenges to align its practices to impact positively on the planet's changing climate. Businesses have the opportunity to turn this adversity to their advantage by developing strategies and new products to empower themselves to cope with the changing external physical and social environments.

Through adverse public opinion firms not acting in the best interests of consumers, or that fail to ensure their organisational impact on the environment is minimised, could face severe reputational and adaptation risks. Such risks will damage brand value and may lead to loss of customers, market share, and could give rise to litigation.

Carbon Finance provides a means to mitigate these risks, encapsulating a strategy designed to support the evolution and implementation of environmentally oriented business practice, thereby promoting long-term sustainability.

Carbon's future in South Africa

In his 2008 budget speech Trevor Manuel acknowledged that environmental protection and biodiversity conservation are required to support sustainable development. Government, in establishing a climate change strategy, calls for a coordinated approach to support initiatives dealing with environmental concerns, air pollution and climate change.

The following incentives and taxes will be investigated:

- ▶ Introducing emission charges and taxes in 2009.
- ▶ Tax incentives aimed at encouraging the uptake and/or development of cleaner production technologies.
- ▶ Incentives, created through vehicle taxes, for the introduction of vehicles with reduced emissions and increased fuel efficiency.

An electricity levy to support energy efficiency will be effective from the third quarter of 2008. A 2c/kWh tax on electricity generated from non-renewable sources will support Eskom's energy efficiency drive and aid environmental protection, given that coal-based electricity generation accounts for a significant share of carbon dioxide (CO₂).

This levy could translate into an additional 10% increase in costs (ie R10 000 a month on an electricity bill of R100 000 a month, depending on the unit price charged).

Reducing one's organisational carbon footprint not only positions the business well in terms of future regulation, but can also generate valuable income. Certified Emission Reductions (CERs aka carbon credits) can be traded and represent additional

revenue streams through expected future cashflows. This mechanism was established through the Kyoto Protocol with the aim of making previously unprofitable or marginal projects possible in developing countries using the Clean Development Mechanism (CDM).

Nedbank carbon asset management

To position Nedbank and its clients appropriately for a carbon-constrained future, Nedbank Capital has a dedicated Carbon Finance Team to view carbon dioxide (CO₂) and other emissions holistically. This team is part of the African Treasuries, Carbon & Financial Products unit and, through a multidisciplinary approach, has created a niche centre of excellence that interfaces with other business units. Ultimately, the objective is to leverage specialist skills to enhance our client service offering.

Our value proposition is to look at emissions end to end using a five-pronged approach. All these activities draw on crossfunctional expertise in finance that underpins the projects.

The value proposition comprises:

- ▶ Sustainability – devising carbon strategy and policy.
- ▶ Carbon Advisory and Footprinting services.
- ▶ Identification and development of CDM projects.
- ▶ Identification and development of Energy Efficiency projects.
- ▶ Carbon Trading – trading of CERs and VERs and providing client brokerage services to monetise carbon benefits or to obtaining carbon neutrality.

The value proposition is illustrated in the diagram on the next page.

NEDBANK CAPITAL'S CARBON ASSET MANAGEMENT OFFERING

SUSTAINABILITY – CARBON STRATEGY AND POLICY

CARBON ADVISORY AND FOOTPRINTING SERVICES

CLEAN DEVELOPMENT MECHANISM

ENERGY EFFICIENCY

CARBON NEUTRALITY

FEATURES

- Constitute business case for climate change and sustainability
- Provide sustainability, carbon strategy and benchmarking
- Provide policy and management system advice
- Analyse impacts, risks and opportunities – direct and indirect impacts across supply chain
- Provide climate change and sustainability reporting framework

- Approach carbon footprint management holistically
- Source necessary industry expertise with relevant databases
- Engage client and define scope and boundary of study
- Construct carbon footprint – collect energy and emissions data
- Analyse data and establish emissions profile
- Identify carbon risks and emission reduction opportunities
- Present carbon footprint report and energy usage

- Identify CDM opportunities and determine emissions baseline
- Source necessary industry expertise
- Model the various scenarios and advise clients on the use of their CERs
- Project manage CDM projects
- Manage carbon credit exposure in accordance with the client's mandate
- Assist with the negotiation and drafting of emissions reduction purchase agreements (ERPA)
- Identify and implement VER opportunities

- Undertake initial energy audit covering electrical consumption
- Converse with managers and technicians; the aim is to assist and develop EE initiatives in conjunction with staff
- Identify CDM opportunities and conduct feasibility study (not all energy efficiency projects have CDM application)
- Arrange funding for the implementation of energy efficiency recommendations

- Calculate total carbon footprint
- Identify, finance and implement energy efficiency programmes
- Identify, finance and implement other emissions reduction projects
- Procure CERs for the remainder of their carbon footprint
- Buy and sell CERs through a trading desk

BENEFITS

- Position for future carbon legislation and governance
- Become an environmental leader in climate change mitigation
- Able to adapt to changing consumer attitude and demands

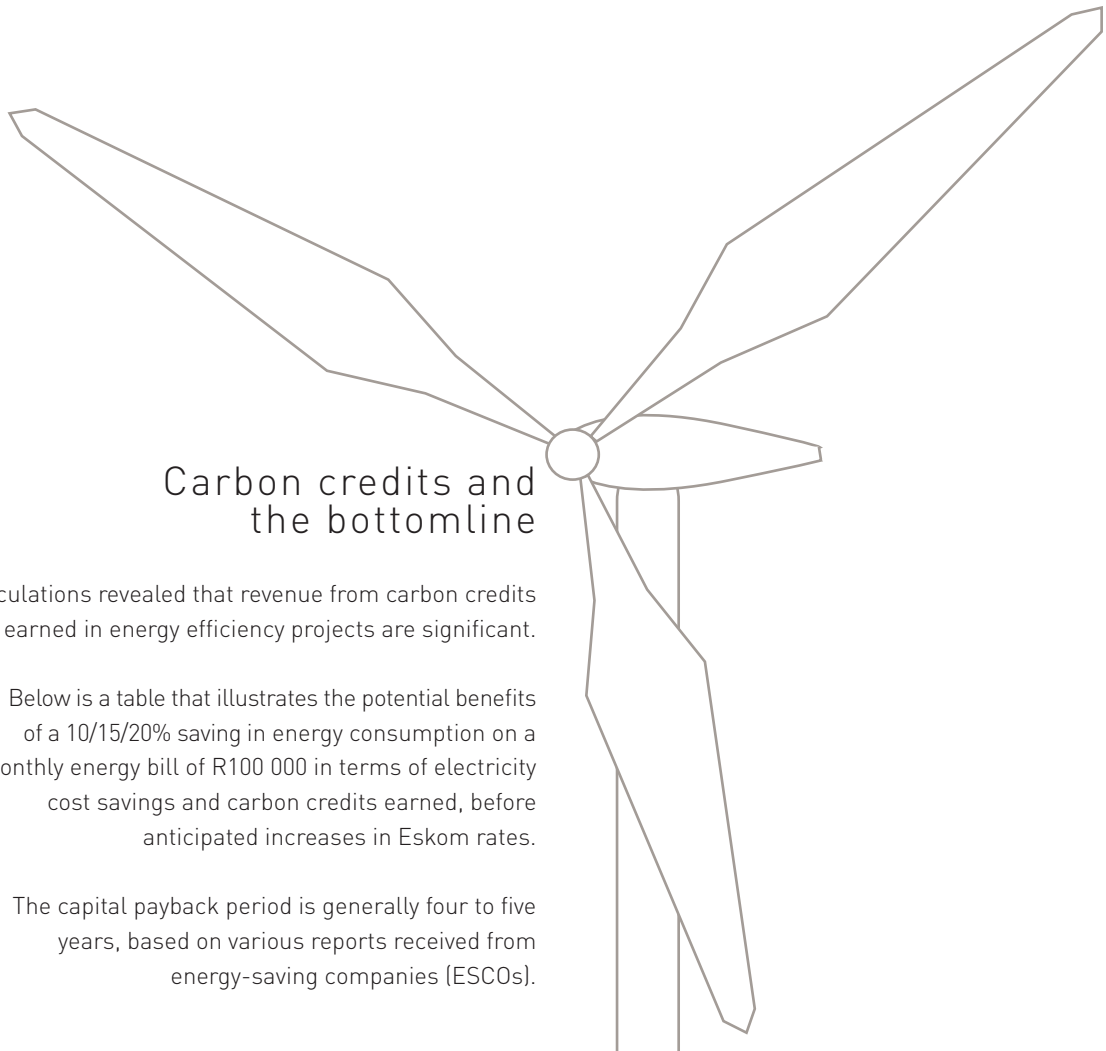
- Participate meaningfully in Carbon Disclosure Project
- Assist with fulfilling JSE SRI Index criteria
- Use the carbon footprint in all sustainability reporting

- Earn additional revenue through annuity streams
- Make use of Kyoto funding mechanism
- Make previously marginal or unprofitable projects possible

- Form the basis of an integrated sustainability strategy
- Reduce energy bills with attractive IRRs
- Reduce energy consumption
- Mitigate levy on non-renewable energy generation
- Assist in Eskom's demand-side management programme

- Facilitate carbon neutrality through offsetting

CARBON FINANCE



Carbon credits and the bottomline

Calculations revealed that revenue from carbon credits earned in energy efficiency projects are significant.

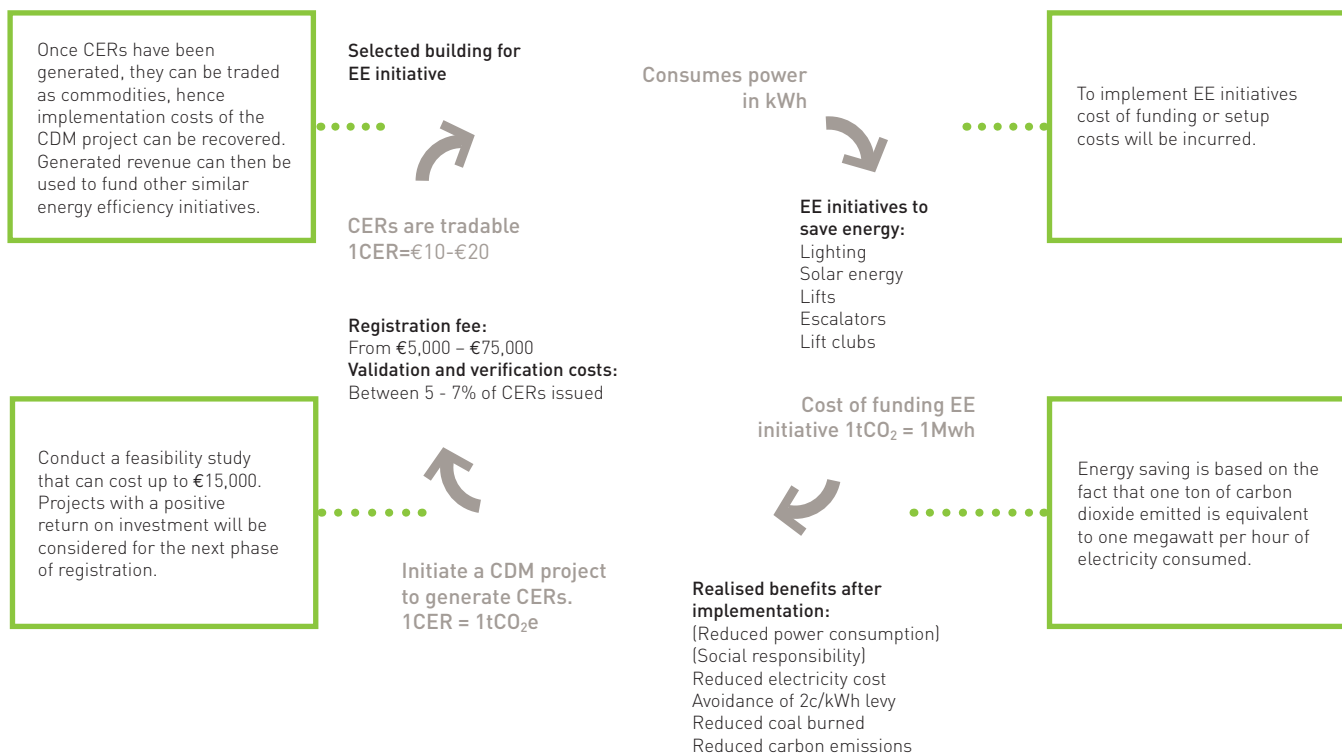
Below is a table that illustrates the potential benefits of a 10/15/20% saving in energy consumption on a monthly energy bill of R100 000 in terms of electricity cost savings and carbon credits earned, before anticipated increases in Eskom rates.

The capital payback period is generally four to five years, based on various reports received from energy-saving companies (ESCOs).

Monthly bill	Assumed rate per kWh	kWh consumed	% saving kWh	Possible monthly saving	Possible annual saving	Possible tons of CO ₂ saved annually	Annual carbon saving	2c/kWh levy saving	Total annual saving
R 100,000	R 0.21	476,190	10%	R 10,000	R 120,000	570	R 68,400	R 11,430	R 199,830
			47,619						
R 100,000	R 0.21	476,190	15%	R 15,000	R 180,000	855	R 102,600	R 17,143	R 299,743
			71,428						
R 100,000	R 0.21	476,190	20%	R 20,000	R 240,000	1140	R 136,800	R 22,860	R 399,660
			95,238						

PROJECT CYCLE

The project cycle below illustrates the steps to follow in producing CERs for an energy efficiency (EE) project.



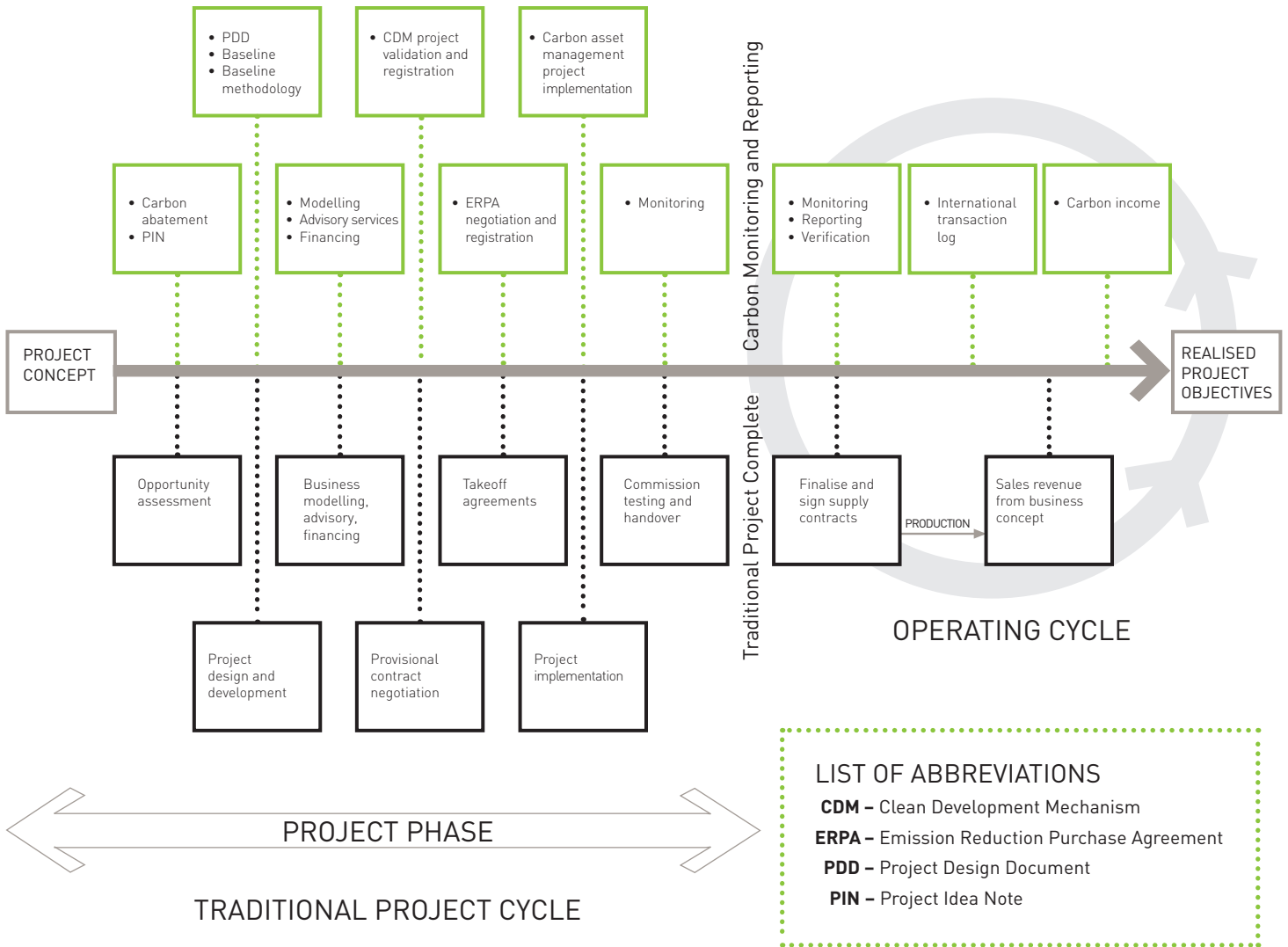
'Putting an appropriate price on carbon – explicitly through tax or trading, or implicitly through regulation – means that people are faced with the full social cost of their actions.'

Stern Review Report



BUSINESS AND CDM PROJECT ALIGNMENT

CARBON PROJECT CYCLE





Types of CDM projects

Although the diagram illustrates how carbon credits can be obtained through energy efficiency, it is important to note that carbon credits can be earned through many other emission reduction initiatives. Projects relating to biomass co-generation, methane reduction/capture from landfill sites or animal waste, fuel switches from fossil to cleaner-burning fuel, wind- and hydro-power generation, emission reduction in the transport sector and renewable energy generation are all examples of eligible CDM projects.

Project cycle

The CDM project cycle is aligned with the normal end-to-end business project cycle as can be seen from the illustration on the facing page, demonstrating a need for the coordination of specific actions or events within the flow of these projects so that the potential CER benefits are not lost to the project owner.

Nedbank's climate change governance

Strong governance structures need to be in place to address climate change and to take early action regarding the risks and opportunities associated with it. More than this, it requires a holistic and forward-looking management approach.

To date Nedbank:

- ▶ Has board oversight – responsibility for climate-related policies and initiatives has been assigned.
- ▶ Implemented management and staff performance requirements – incorporate social and environmental responsibility.
- ▶ Practices internal greenhouse gas management – Nedbank's carbon footprint is calculated annually and is publicly disclosed through the Carbon Disclosure Project and Sustainability Report using the Global Reporting Initiative guidelines.
- ▶ Applies risk management and external financing – adopted Equator Principles to ensure projects financed are socially responsible and environmentally sound.
- ▶ Seizes climate change opportunities – extensive EE drive to reduce energy consumption in offices and buildings throughout the group.

Nedbank's sustainability and climate change credentials

Equator Principles for Managing Social and Environmental Issues Project Financing

Only African bank signatory

Most Comprehensive Climate Change Disclosure Practices 2007

Placed joint sixth out of the JSE top 40 companies

JSE SRI Index Outstanding Performer

First in 'low impact' category

United Nations Environmental Programme Finance Initiative

First of only two South African signatories

2005 and 2006 Banker Awards

Best 'Emerging Market Bank for Corporate Social Responsibility'

Dow Jones Sustainability Index Membership

One of only three strictly South African companies

World Wildlife Fund Conservation Partnership

Only African company

Ernst & Young Excellence in Sustainability Reporting

Best-placed South African bank

Mail & Guardian Greening the Future

Winner 'Most Innovative Environmental Strategies'

FT Sustainable Banking Awards: Emerging Markets Sustainable Bank of the Year

2008 Regional Winner – Middle East/Africa

2007 Regional Winner – Middle East/Africa



Contact details

Clients should engage Nedbank through their existing relationship manager, corporate, or investment banker, as appropriate, to explore Carbon Finance and other environmental opportunities. For project related queries email carbon@nedbank.co.za. Alternatively, contact our Carbon Finance Team directly as follows:

KEVIN WHITFIELD

Head: African Treasuries, Carbon & Financial Products unit
Tel: +27 (0)11 294 2268
Cell: +27 (0)82 901 5846
Email: kevinwh@nedbankcapital.co.za

PAUL GRIFFIN

Senior Administrator
Tel: +27 (0)11 295 7232
Cell: +27 (0)83 634 4335
Email: paulg@nedbankcapital.co.za

NELIS ENGELBRECHT

Senior Structurer
Tel: +27 (0)21 416 6496
Cell: +27 (0)82 882 4593
Email: nelise@nedbankcapital.co.za

Business unit contacts

PETER LANE

Nedbank Capital: Group Treasurer
Tel: +27 (0)11 294 3459
Email: peterl@nedbankcapital.co.za

GRAEME AURET

Nedbank Corporate: Divisional Director
Tel: +27 (0)11 295 8506
Email: graemea@nedbank.co.za

ZIV BEN-AMI

Transactor: Carbon
Tel: +27 (0)11 294 3021
Cell: +27 (0)72 611 5721
Email: zivb@nedbankcapital.co.za

CAROL CORNELIUS

PA & Administrator
Tel: +27 (0)11 295 7155
Cell: +27 (0)73 120 2227
Email: carolcor@nedbankcapital.co.za

BRAD MAXWELL

Executive Head: Investment Banking
Tel: +27 (0)11 295 8422
Cell: +27 (0)11 295 8422
Email: bmaxwell@nedbankcapital.co.za

MAKE THINGS HAPPEN 

NEDBANK | CAPITAL

A Member of the  OLD MUTUAL Group